

Amendments to the Claims

1. (Currently amended) A production method of biodegradable plastic comprising:
~~using providing~~ lactic acid as a raw material;
subjecting the lactic acid to condensation polymerization by dehydration under high temperature and reduced pressure in the presence of a combination of zinc chloride and stannous chloride metal catalyst; and
obtaining polylactic acid that is a main component of the biodegradable plastic.

2. (Currently amended) A production method of biodegradable plastic comprising:
~~using providing~~ lactic acid as a raw material;
subjecting the lactic acid to condensation polymerization by dehydration under high temperature and reduced pressure in the presence of a combination of zinc chloride and stannous chloride metal catalyst;
releasing water vapor generated during the condensation polymerization by dehydration to the outside of the system;
determining the end point of the reaction by measuring the released amount of the water vapor concurrently with the release thereof; and
obtaining polylactic acid that is a main component of the biodegradable plastic.

3. (Cancelled)

4. (Currently amended) The production method of biodegradable plastic according to claim 1 or 2 3, wherein the addition amount of the zinc chloride is from 0.1 to 0.3% by weight and the addition amount of the stannous chloride is from 0.1 to 1% by weight, when a combination of the zinc chloride and stannous chloride is used as the catalyst.

5. (Original) The production method of biodegradable plastic according to claim 1 or 2, wherein the temperature of the condensation polymerization by dehydration is from 180 to 220°C

and the degree of vacuum at the time of the condensation polymerization by dehydration is from -0.05 to -0.08 Mpa.

6-7. (Cancelled)

8. (New) A single shaft apparatus for producing biodegradable plastic, comprising:

an airtight container having a vertical axis,

said airtight container comprising a lower main body and an upper cover body,

a vertical shaft disposed through the center of said airtight container along the vertical axis of the airtight container, said shaft including a mixing blade, said shaft having an upper end extending outside of said airtight container operably connected to a motor, said shaft having a lower end comprising a screw shaft,

a heating element disposed on an outside surface of said lower main body of said airtight container,

said airtight container being provided with an inlet on said upper cover body for introducing lactic acid or catalyst into said airtight container,

said airtight container being provided with a product outlet on said lower main body for discharging polylactic acid,

said airtight container being provided with a vent on said upper cover body for venting water vapor,

said vent being operably connected to a device for sensing water vapor, a device for measuring water vapor, and a pressure reducing unit to reduce pressure inside said airtight container.